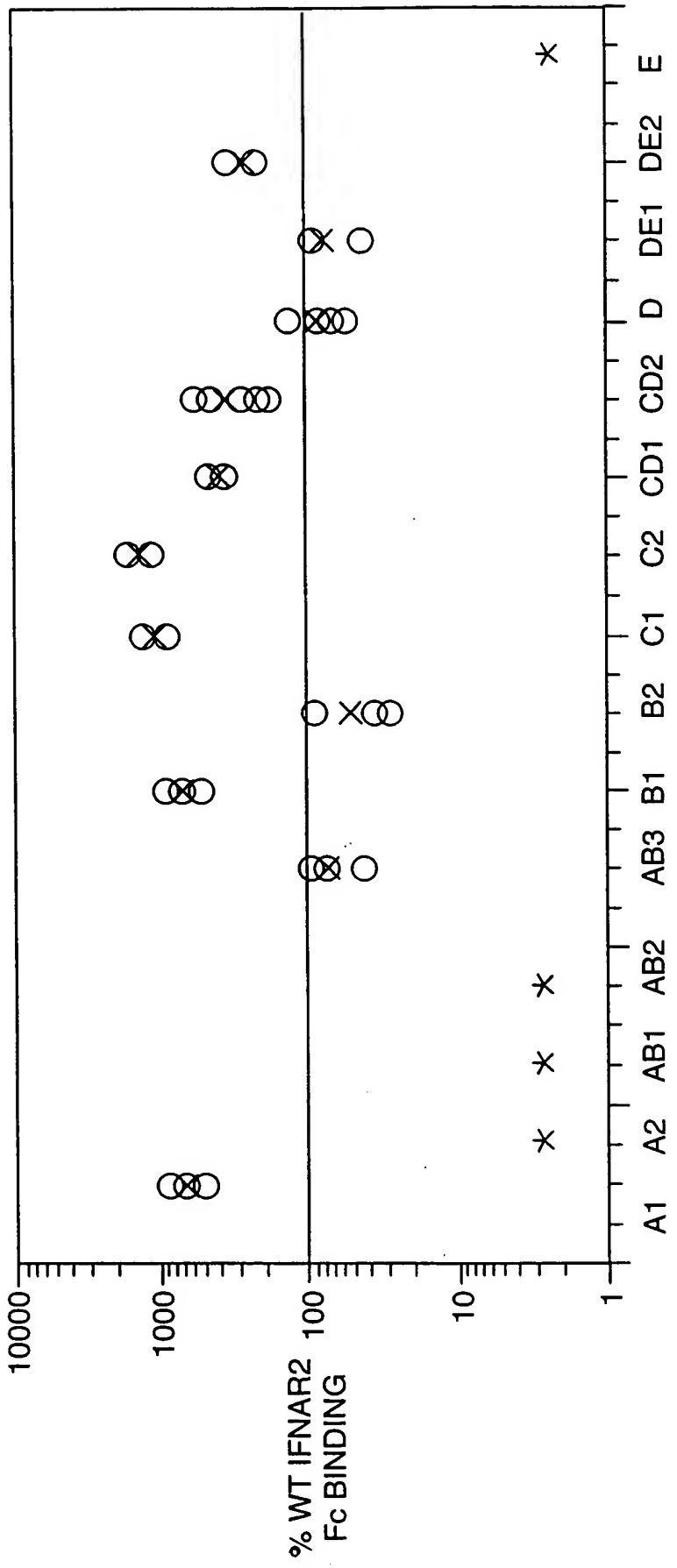
% WT IFNAR2
Fc BINDING
10000
1000
100
10
1
A1
A2
AB1
AB2
AB3
B1
B2
C1
C2
CD1
CD2
D
DE1
DE2
E

FIG. 1

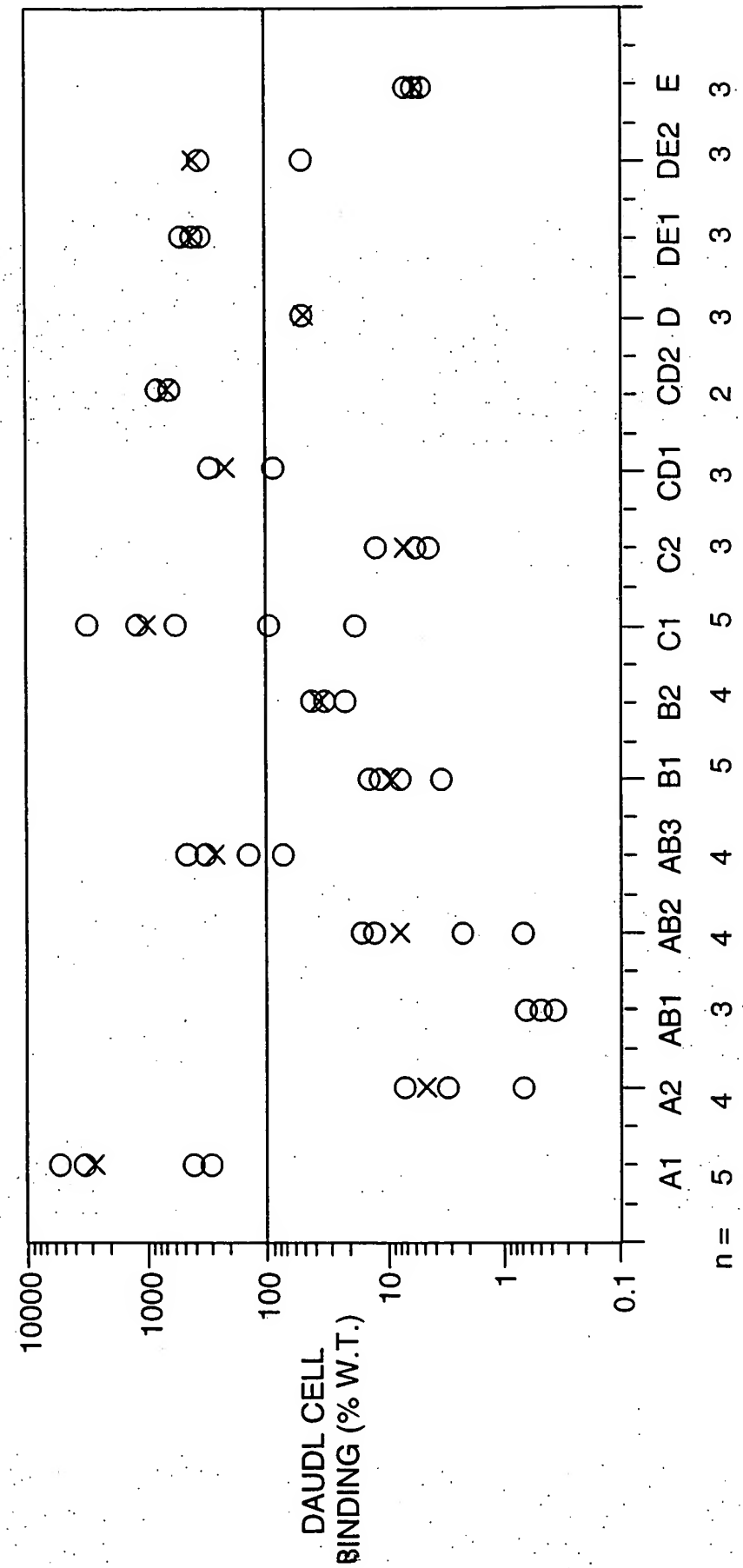
DAUDL CELL
BINDING (% W.T.)
10000
1000
100
10
1
0.1
n = 5 4 3 4 4 5 4 5 3 3 2 3 3 3 3
A1 A2 AB1 AB2 AB3 B1 B2 C1 C2 CD1 CD2 D DE1 DE2 E

FIG. 2

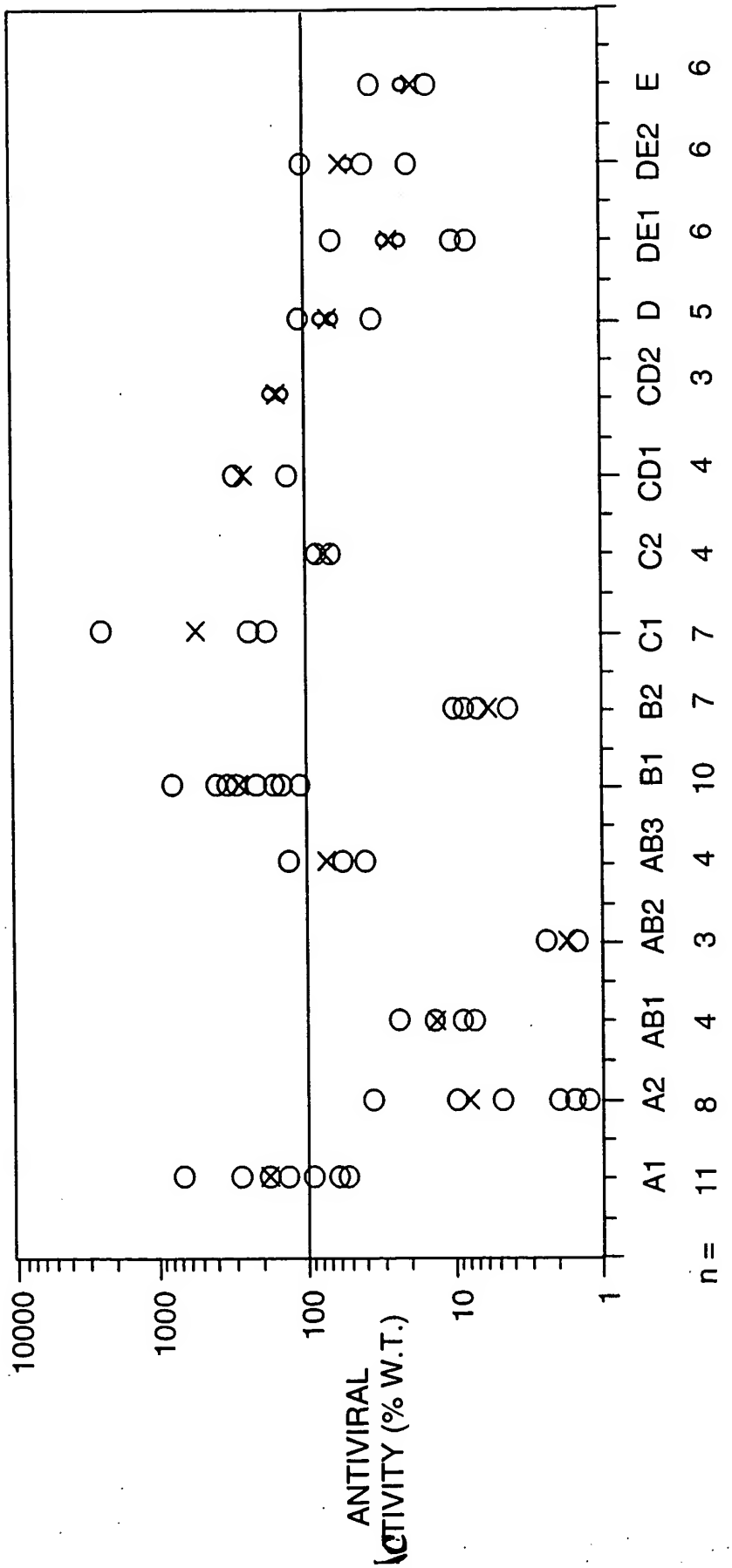
ANTIVIRAL ACTIVITY (% W.T.)
10000
1000
100
10
1
n = 11 8 4 3 4 10 7 7 4 4 3 5 6 6 6
A1 A2 AB1 AB2 AB3 B1 B2 C1 C2 CD1 CD2 D DE1 DE2 E

FIG. 3

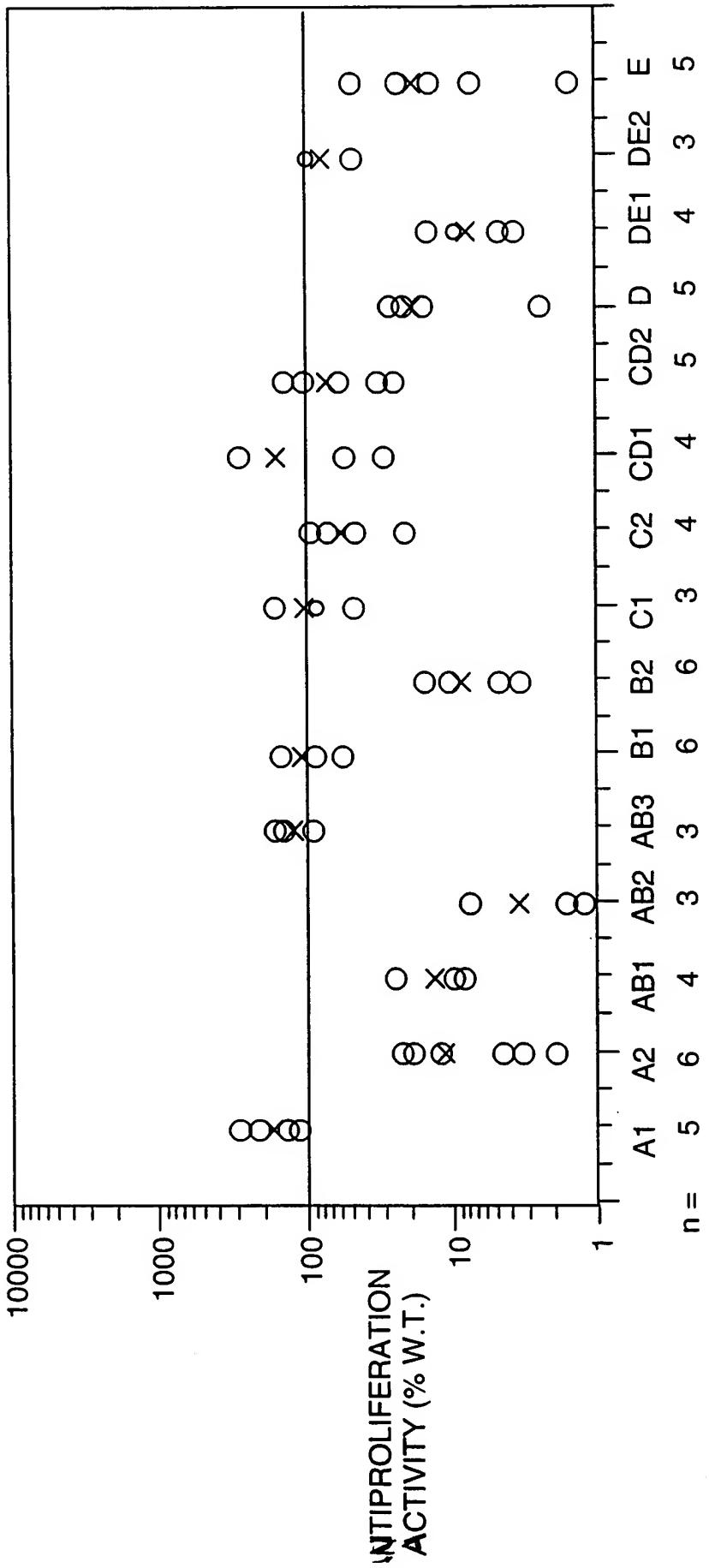
10000
1000
100
10
1
ANTIPROLIFERATION ACTIVITY (% W.T.)
n = 5 6 4 3 3 6 6 3 4 4 5 5 4 3 5
A1 A2 AB1 AB2 AB3 B1 B2 C1 C2 CD1 CD2 D DE1 DE2 E

FIG. 4

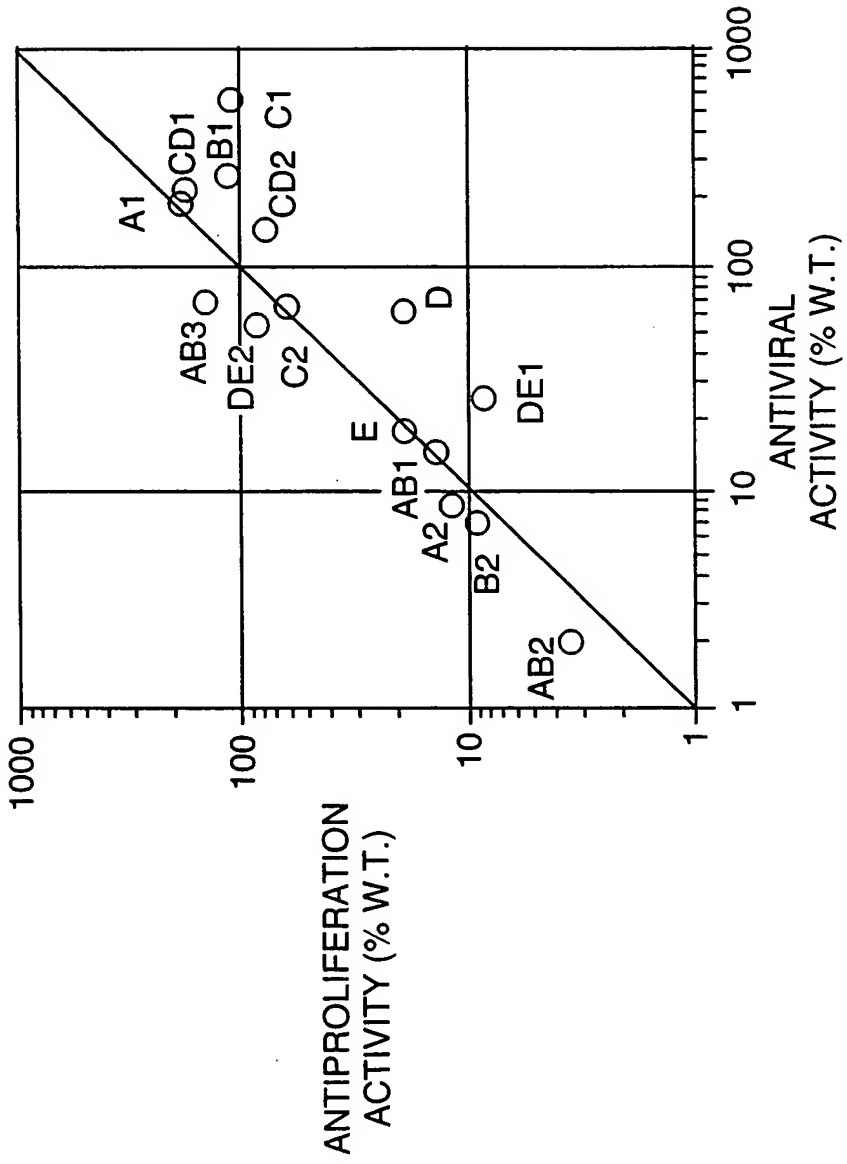
1000
100
10
1
ANTIPROLIFERATION
ACTIVITY (% W.T.)
1
10
100
1000
ANTIVIRAL
ACTIVITY (% W.T.)
A1
CD1
B1
CD2
C1
AB3
DE2
C2
D
E
AB1
A2
B2
DE1
AB2

FIG. 5

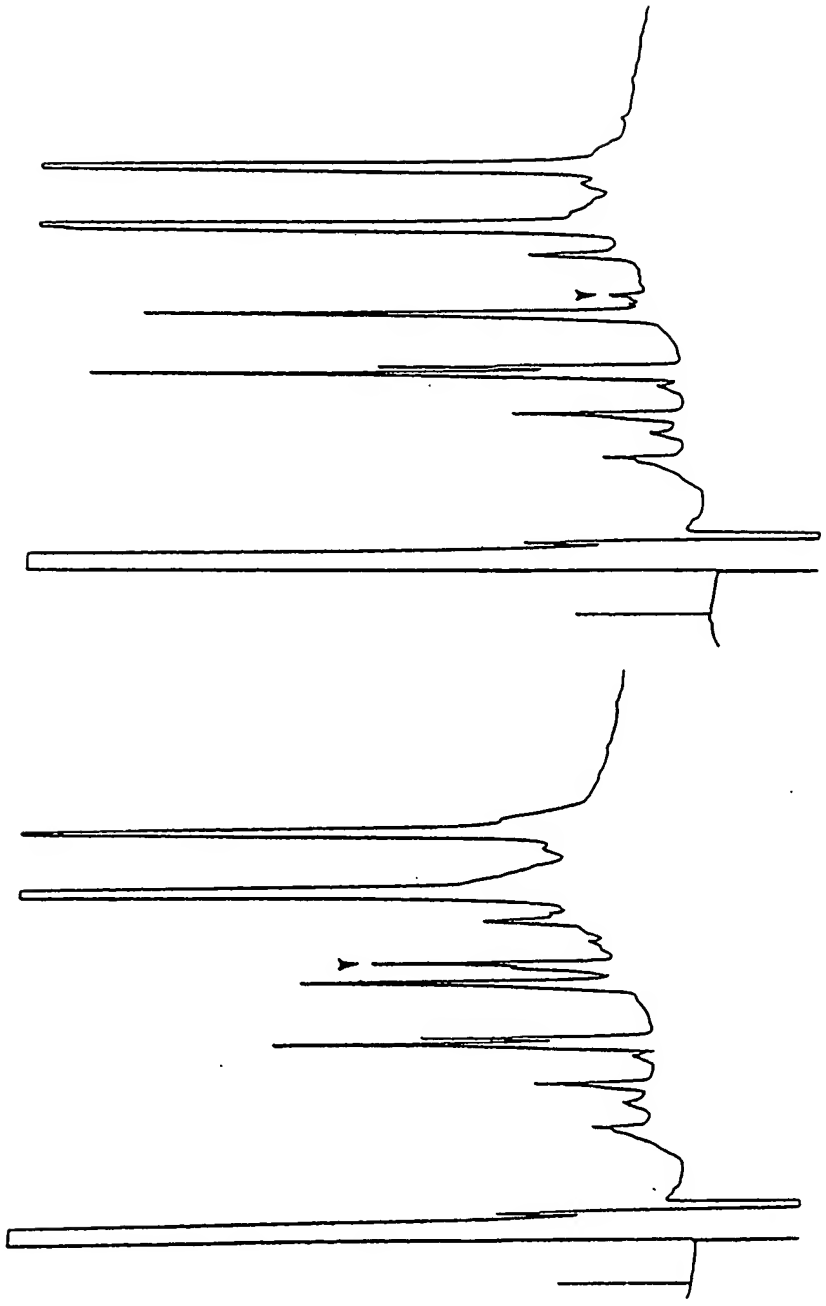

FIG. 6B

FIG. 6A

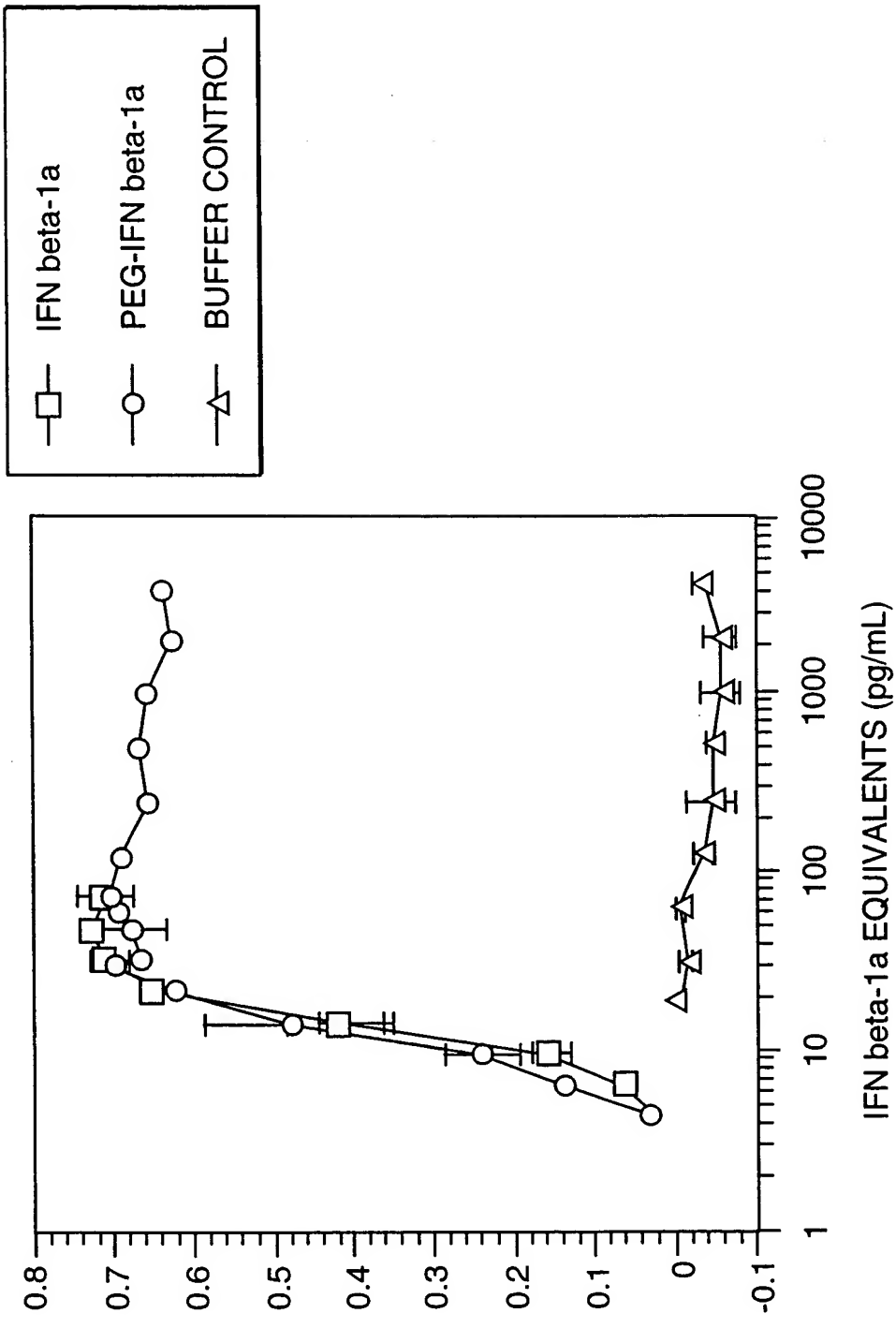
IFN beta-1a
PEG-IFN beta-1a
BUFFER CONTROL
ABSORBANCE (450 nm)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
1
10
100
1000
10000
IFN beta-1a EQUIVALENTS (pg/mL)

FIG. 7

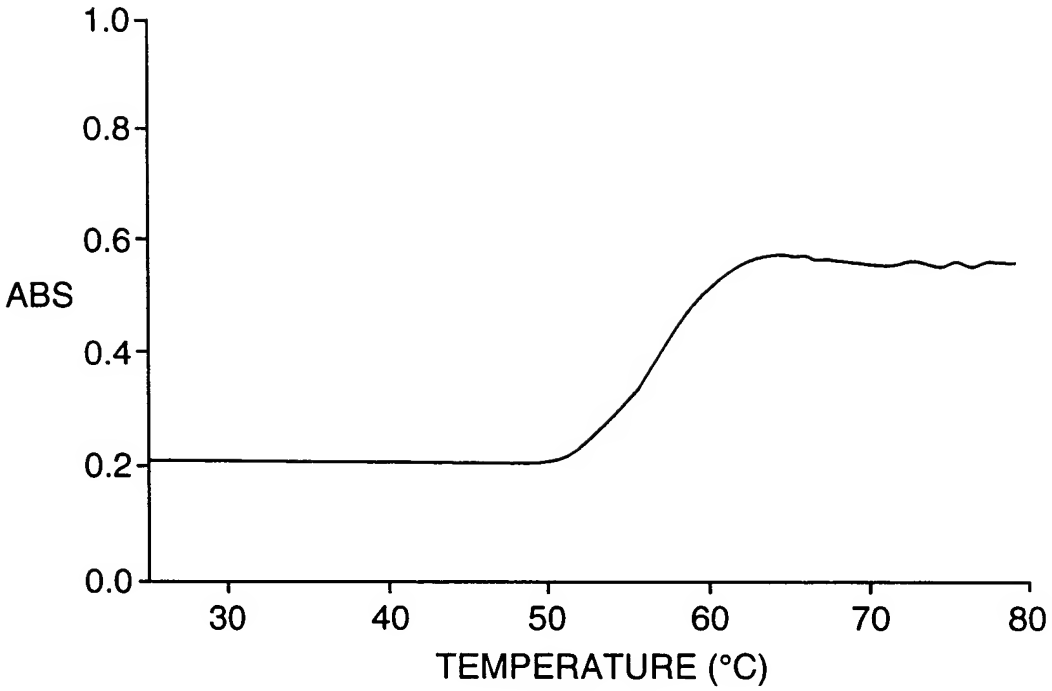
1.0
0.8
0.6
ABS
0.4
0.2
0.0
30
40
50
60
70
80
TEMPERATURE (°C)

FIG. 8a

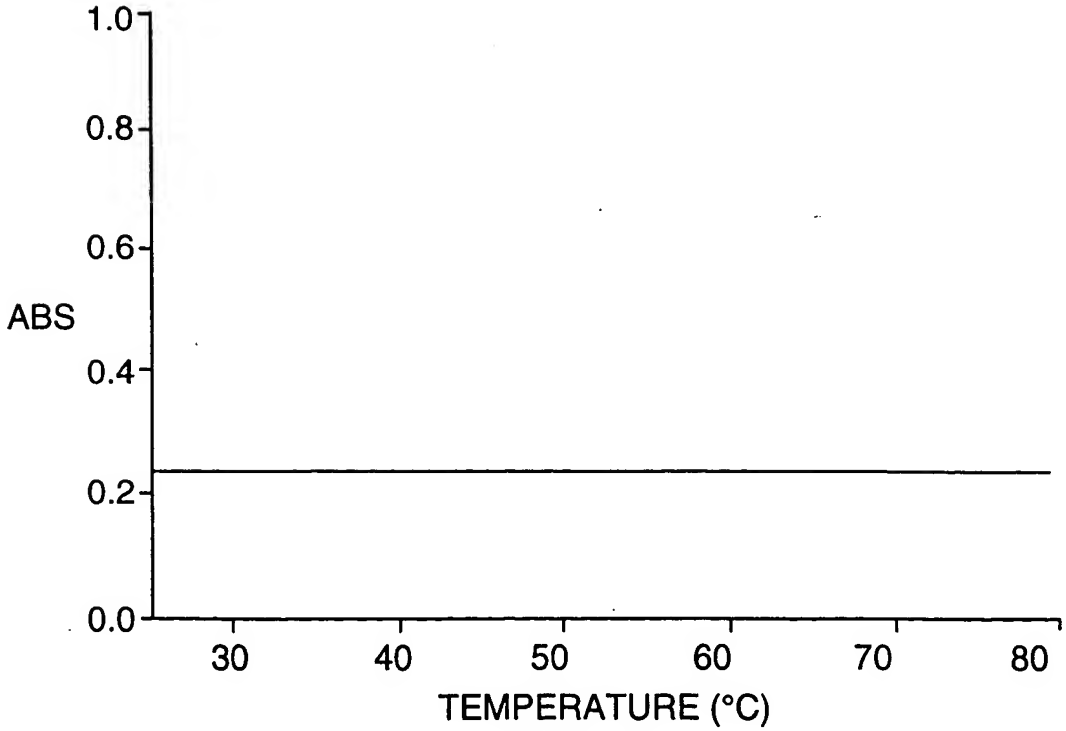
1.0
0.8
0.6
ABS
0.4
0.2
0.0
30
40
50
60
70
80
TEMPERATURE (°C)

FIG. 8b

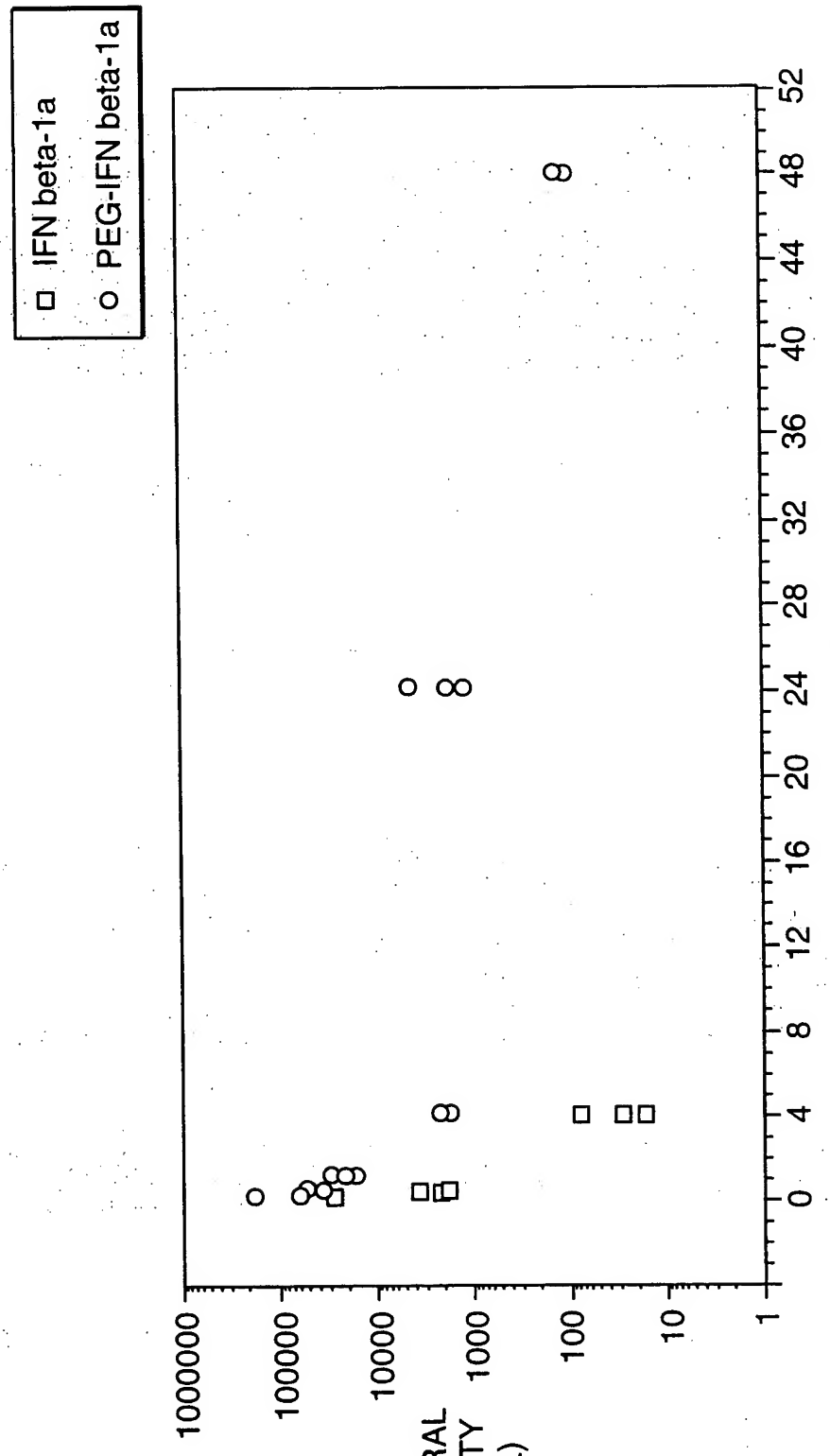
IFN beta-1a
PEG-IFN beta-1a
ANTIVIRAL ACTIVITY (U/mL)
1000000
100000
10000
1000
100
10
1
0
4
8
12
16
20
24
28
32
36
40
44
48
52
TIME AFTER INJECTION (HOURS)

FIG. 9

```
  1 TCCGGGGGCC ATCATCATCA TCATCATAGC TCCGGAGACG ATGATGACAA GATGAGCTAC
    AGGCCCCCGG TAGTAGTAGT AGTAGTATCG AGGCCTCTGC TACTACTGTT CTACTCGATG
  1 SerGlyGlyH isHisHisHi sHisHisSer SerGlyAspA spAspAspLy sMetSerTyr

 61 AACTTGCTTG GATTCCTACA AAGAAGCAGC AATTTTCAGT GTCAGAAGCT CCTGTGGCAA
    TTGAACGAAC CTAAGGATGT TTCTTCGTCG TTAAAAGTCA CAGTCTTCGA GGACACCGTT
 21 AsnLeuLeuG lyPheLeuGl nArgSerSer AsnPheGlnC ysGlnLysLe uLeuTrpGln

121 TTGAATGGGA GGCTTGAATA CTGCCTCAAG GACAGGATGA ACTTTGACAT CCCTGAGGAG
    AACTTACCCT CCGAACTTAT GACGGAGTTC CTGTCCTACT TGAAACTGTA GGGACTCCTC
 41 LeuAsnGlyA rgLeuGluTy rCysLeuLys AspArgMetA snPheAspIl ePr oGluGlu

181 ATTAAGCAGC TGCAGCAGTT CCAGAAGGAG GACGCCGCAT TGACCATCTA TGAGATGCTC
    TAATTCGTCG ACGTCGTCAA GGTCTTCCTC CTGCGGCGTA ACTGGTAGAT ACTCTACGAG
 61 IleLysGlnL euGlnGlnPh eGlnLysGlu AspAlaAlaL euThrIleTy rGluMetLeu

241 CAGAACATCT TTGCTATTTT CAGACAAGAT TCATCTAGCA CTGGCTGGAA TGAGACTATT
    GTCTTGTAGA AACGATAAAA GTCTGTTCTA AGTAGATCGT GACCGACCTT ACTCTGATAA
 81 GlnAsnIleP heAlaIlePh eArgGlnAsp SerSerSerT hrGlyTrpAs nGluThrIle

301 GTTGAGAACC TCCTGGCTAA TGTCTATCAT CAGATAAACC ATCTGAAGAC AGTCCTGGAA
    CAACTCTTGG AGGACCGATT ACAGATAGTA GTCTATTTGG TAGACTTCTG TCAGGACCTT
101 ValGluAsnL euLeuAlaAs nValTyrHis GlnIleAsnH isLeuLysTh rValLeuGlu

361 GAAAAACTGG AGAAAGAAGA TTTCACCAGG GGAAAACTCA TGAGCAGTCT GCACCTGAAA
    CTTTTTGACC TCTTTCTTCT AAAGTGGTCC CCTTTTGAGT ACTCGTCAGA CGTGGACTTT
121 GluLysLeuG luLysGluAs pPheThrArg GlyLysLeuM etSerSerLe uHisLeuLys

421 AGATATTATG GGAGGATTCT GCATTACCTG AAGGCCAAGG AGTACAGTCA CTGTGCCTGG
    TCTATAATAC CCTCCTAAGA CGTAATGGAC TTCCGGTTCC TCATGTCAGT GACACGGACC
141 ArgTyrTyrG lyArgIleLe uHisTyrLeu LysAlaLysG luTyrSerHi sCysAlaTrp

481 ACCATAGTCA GAGTGGAAAT CCTAAGGAAC TTTTACTTCA TTAACAGACT TACAGGTTAC
    TGGTATCAGT CTCACCTTTA GGATTCCTTG AAAATGAAGT AATTGTCTGA ATGTCCAATG
161 ThrIleValA rgValGluIl eLeuArgAsn PheTyrPhel leAsnArgLe uThrGlyTyr

541 CTCCGAAAC
    GAGGCTTTG
181 LeuArgAsn
```

FIG. 10

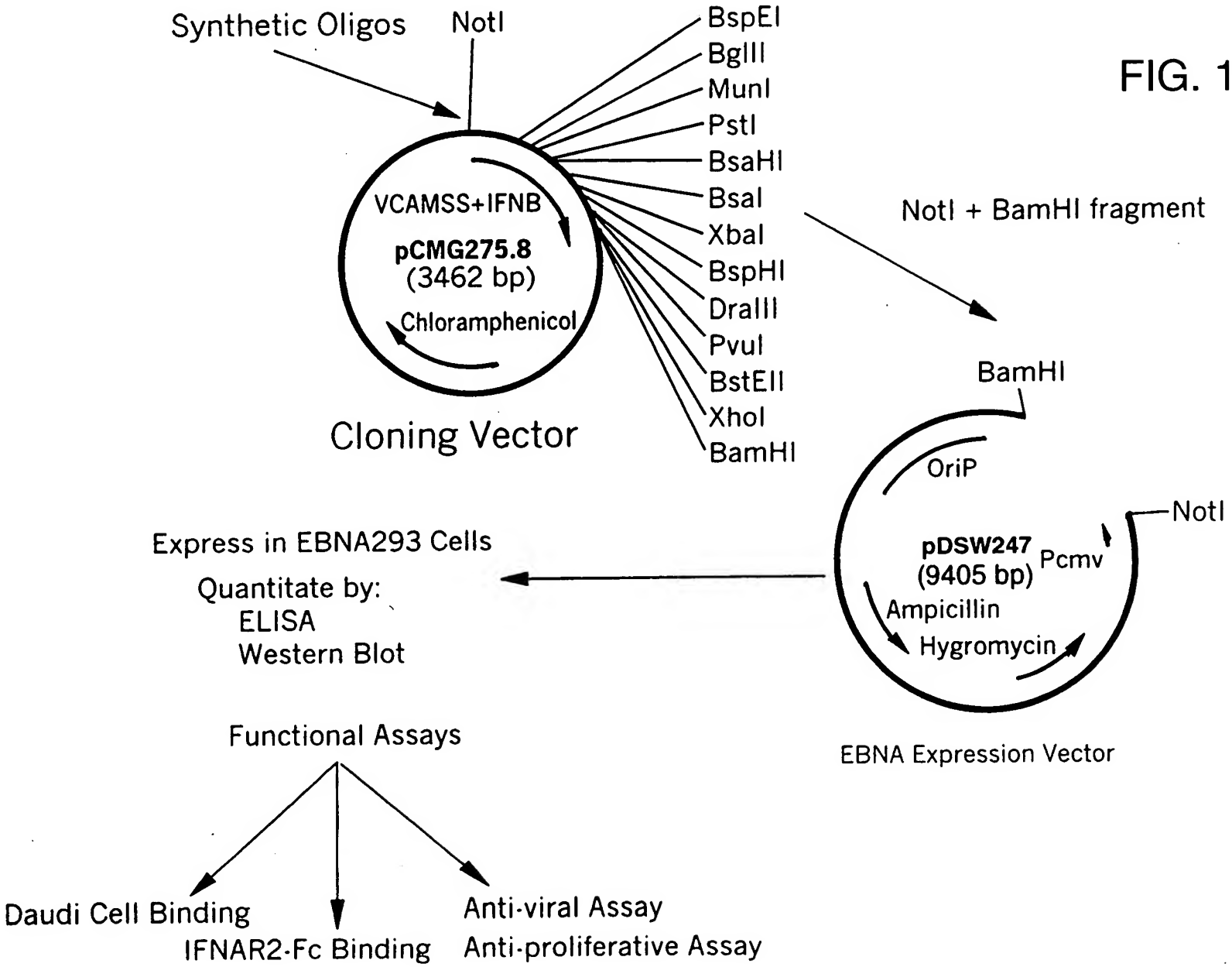
Synthetic Oligos
NotI
BspEI
BglII
MunI
PstI
BsaHI
BsaI
XbaI
BspHI
DraIII
PvuI
BstEII
XhoI
BamHI
VCAMSS+IFNB
pCMG275.8
(3462 bp)
Chloramphenicol
Cloning Vector
NotI + BamHI fragment
BamHI
OriP
NotI
pDSW247
(9405 bp)
Pcmv
Ampicillin
Hygromycin
EBNA Expression Vector
Express in EBNA293 Cells
Quantitate by:
ELISA
Western Blot
Functional Assays
Daudi Cell Binding
IFNAR2-Fc Binding
Anti-viral Assay
Anti-proliferative Assay

FIG. 11